

# Agricultural Situation

Statistical  
Reporting  
Service

U.S. Department  
of Agriculture

Vol. 52, No. 11

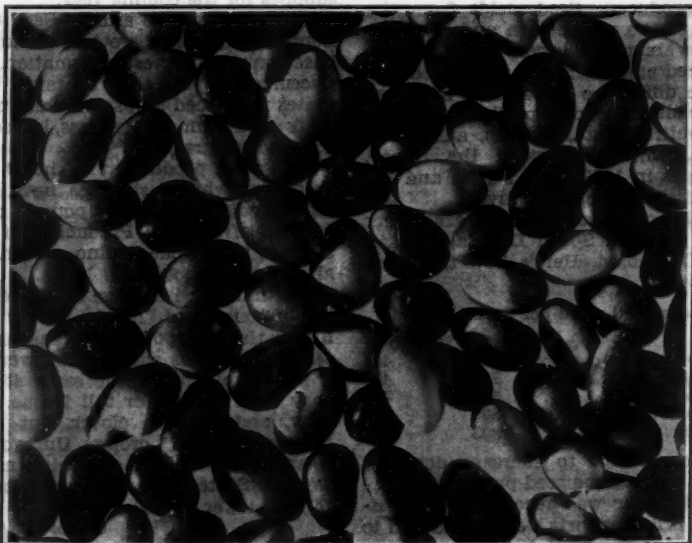
*grass and legume*

## SEEDS

*past*

*present*

*future*



## SEEDS PAST AND PRESENT: Acreage Shifts, Yields Increase, Production Down This Year

Specialized seed production for grasses and legumes goes back many years, but began in earnest only about twenty-five years ago.

Prior to World War II, grass and legume seeds came from three sources:

—Farmers who took a crop of seed from their fields if conditions were favorable.

—Sizable seed imports where domestic production fell short. Alfalfa, clovers, millets, orchardgrass, winter rape, ryegrass, and vetch led the list of imported seeds.

—Specialized seed farms, relatively small in importance and located in the area where the seed was to be used:

During World War II, an assured supply of domestic seeds was needed. Seed farms sprang up in the Far West where dry weather favored pollination and harvest.

By the end of the War, a big share of the production of many types of grass and legume seeds had shifted from the Corn Belt, Plains, and Southern States to the West.

Yields on western farms have increased with greater use of irrigation and better crop practices of commercial seed producers. Seed yields from the fields of the midwestern and southern States are much lower, and have not changed appreciably in recent years.

The difference in yields is apparent in the alfalfa seed crop. Yields this year in South Dakota, Kansas, and Oklahoma, which harvested the largest acreages in 1968, were 54, 80, and 120 pounds per acre, respectively.

Yields out West, however, are higher than those in South Dakota, Kansas, and Oklahoma. Here's how they look this year:

### Alfalfa seed yield per acre—Pounds

	1968	1963-66 ave.
Oregon.....	350	464
Washington.....	500	439
California.....	500	415
Idaho.....	290	310
Nevada.....	395	287

The attempt to increase domestic grass and legume seed production during the War was successful. Government price supports were introduced to encourage output.

By 1950, however, seed production reached surplus levels, and in 1952 the price supports were removed.

Production has declined since the early 1950's, as shown by the total output of 17 grass and legume seeds, reported by SRS:

Seed Production (million pounds)	
1944 .....	586
1950 .....	787
1960 .....	684
1967 (prelim.) .....	524

Because each variety of seed is produced for a relatively small and distinct market, prices are sensitive to the balance of supply and demand.

The Statistical Reporting Service serves as a source of supply information for many major seed crops. Carryovers of old-crop seeds by dealers are reported in an August stocks report.

Beginning with a crimson clover forecast in June, timely production estimates are released for 14 crops during the harvest of each crop. These reports list the estimated production, dealers' carryovers, farmers' carryovers, and quantity imported during the past year, to provide a complete estimate of seed supplies for the coming year.

In December, the annual Seed Crop Summary provides revised estimates based on post-harvest information. The December report also contains estimates for 3 seed crops for which forecasts are not made: ryegrass, lespedeza, and orchardgrass.

This year, production of the 14 seed crops for which estimates have been made totals 312.8 million pounds, down 9 percent from 1967. Production of only 3 crops, tall fescue, ladino, clover, and alfalfa were above 1967 levels.

The harvested acreage of red fescue, tall fescue, and ladino clover was higher than in 1967, but acreage of the other seed crops was much lower.

Yields told much the same story—they were higher for tall fescue, timothy, and crimson clover, but lower for other seed crops. Unfavorable weather in the seed-producing northwestern States was mainly responsible for the lower yields.

Carrol D. Spenser  
Statistical Reporting Service

## SEED PRICES HIGHER

The prices farmers paid in September for fall-planted seeds were up 7 percent from 1967 this year, due to smaller supplies of many seed crops.

Sharp increases in September prices, compared with a year earlier, were reported for hairy vetch, ladino clover, annual ryegrass, red clover, and common vetch. The prices of uncertified alfalfa, tall fescue, and wild winter pea

seeds were also up notably from the previous September.

Several kinds of seeds cost less, however. Many farmers got a break if they bought crested wheatgrass or redtop, with prices of these seeds down sharply.

Lesser price drops were reported for a number of seeds: timothy, sweet lupine, common crimson clover, reseedling crimson clover, seed wheat, Kentucky bluegrass, blue lupine, and Austrian winter peas.

*Statistical Reporting Service*

### HOW THE SEED CROPS COMPARE

Grasses and legumes change rapidly in popularity, as new varieties are introduced and others become dated. And production of many kinds has decreased considerably since the peak postwar years. Here are the vital statistics for 17 seed crops, reported by SRS:

Kind	Production		Value		Main production areas
	1968	1967	1967 compared with 1960	1967	
	million pounds	million pounds	percent change	million dollars	
Ryegrass.....		<sup>1</sup> 134.2	89	8.3	Oregon.
Alfalfa.....	113.9	113.3	83	46.8	North Central, Mountain, Pacific States.
Tall fescue.....	52.6	49.9	122	4.3	Missouri, Southeast, Oregon.
Red clover.....	42.4	46.6	52	11.9	North Central, Pacific States; Idaho.
Lespedeza.....		<sup>1</sup> 40.4	56	5.9	Southeast, Missouri, Kansas, Arkansas.
Kentucky bluegrass other than Merion.	30.6	34.9	119	( <sup>2</sup> )	North Central States, Northwest, Kentucky.
Timothy.....	22.3	27.6	60	1.5	North Central States.
Hairy vetch.....	8.2	<sup>1</sup> 13.9	284	1.2	Texas, Oregon.
Sweetclover.....	9.4	12.9	47	0.8	West North Central States, Texas.
Chewings fescue.....	5.0	7.4	67	1.6	Oregon.
Bentgrass.....	4.6	7.2	141	2.5	Washington, Oregon.
Crimson clover.....	8.1	8.1	49	1.8	Oregon, East South Central.
Red fescue.....	6.6	8.9	153	1.5	Washington, Oregon.
Orchardgrass.....		<sup>1</sup> 6.9	52	1.1	Missouri, Virginia, Kentucky.
Merion Kentucky bluegrass.	4.5	6.2	200	2.6	Idaho, Pacific States.
Ladino clover.....	3.6	3.6	80	2.1	California.
White clover.....	1.1	2.3	55	0.7	Idaho, Louisiana, Oregon.

<sup>1</sup> Preliminary. <sup>2</sup> Not available.

# FUTURE SEED FARMERS AIM FOR

*In the years ahead, specialized grass and legume seed farms will produce better, more valuable seed to meet the demands for lawn grass and precisely adapted hay and cover crops. But supplies are ample. So the business will go to seed growers with maximum production efficiency and the highest seed quality.*

The benefits of superior quality seed have only begun to be harvested. Although grass and legume seeds have benefited greatly by scientific selection and breeding, tremendous advances in plant science are yet to come. And some farmers still use seed harvested from their own fields or purchased from a neighbor's harvest.

Except in the Northwest, seeds of tall fescue, lespedeza, orchardgrass, sweet-clover, red clover, and alfalfa are still widely harvested on a casual basis—that is, by farmers who harvest a seed crop from hay fields when they can, to earn extra income or obtain their own seed.

## Problems of the Past

As late as 1959, about one-half of the alfalfa seed came from casual harvests. But this method has created several problems in the past.

When most seed came from this type of harvest, production varied widely from year to year, leading to uncertain quality, supply, and prices.

To make up for short supplies, large quantities of seeds were imported. Even as late as 1940, imports contributed 40 percent of our grass and legume seed supply. Part of the supplies of Kentucky bluegrass, fescue, orchardgrass, and various clovers and other grasses are still being imported.

Today, however, the combined production of specialized seed farms and casual seed producers, and imported

seed, provide enough seed to meet yearly needs and leave a reserve supply.

## New Breed of Seed

In the years to come, grass and legume seed production will continue in the direction established in the 1940's, away from home-harvested seed, towards seed produced to exacting standards on specialized seed farms.

Floyd S. Ingersoll, Past President of the American Seed Trade Association, projects these trends to the year 2000.

By that year, Mr. Ingersoll feels, the typical farmer will have much more sophisticated technology at his disposal than today. With little human labor, he will grow a large acreage of the crop best suited to his farm's soil.

It will be a crop which contains very specifically determined characteristics, grown for a special market. Hay, for example, would have a nutritional balance tailored for the livestock destined to consume it.

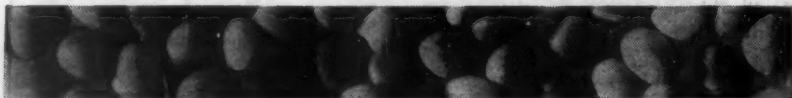
These conditions will make seed harvested from fields grown as pasture and hay obsolete. Mr. Ingersoll foresees that seed producers will be supplied with stock by large public or private research organizations. They will consistently produce seed meeting extremely high quality standards.

As farming conditions move rapidly towards the state described by Mr. Ingersoll, the most efficient producers of the most desirable seed will have the best chance of remaining in business.

## Markets of the Future

As seed farming grows more specialized, it will also grow more competitive. The domestic and foreign markets for high quality seed are potentially large, but require active promotion.

The market for hay seeds is large, but may not increase further in the near future. Harvested hay acreage increased until 1910, when it reached a plateau of



## NEW EXCELLENCE, NEW MARKETS

approximately 70 million acres. After reaching a record level of 77 million acres in 1944, the acreage harvested for hay has declined.

Last year, 64.7 million acres were harvested, the lowest hay acreage since 1908. Despite the low acreage last year, average yield and total production were at record levels.

Other markets for grass and legume seeds are expanding.

As the acres of cropland under cultivation decline, marginal cropland is put under conservation crops which require grass and legume seeds. In 1954, 19 million acres of cropland were idle or in soil conserving uses. By 1967, although the total acres in cropland had declined, improved or idle cropland totaled 35 million acres.

### Pasture

Pasture and range land is another important market for grass and legume seeds. As livestock numbers have increased, there has been more pressure for good grazing land. Even so, the total acreage of pasture and grazing land has declined slowly in recent years.

Livestock are grazed over 922 million acres of land, or about four-tenths of the total U.S. land area.

Of the total grazing land, about 60 million acres are cropland which is temporarily or permanently out of active crop production. Another 225 million acres are forest grazing land.

Land in both types of pasture have declined since 1950. But the remaining land, permanent pasture, increased from 632 million to 640 million acres during 1950-67.

### Lawn

Lawn and turf land are becoming increasingly important as a market for seed. The quantity of seed being used is hard to assess, since many kinds of seed are used in both lawn and pasture.

In 1960, it was estimated that there

were 12 million acres in nonagricultural turf, including areas such as lawns, parks, play fields, road embankments, etc. This area increases with the growth of urban lands and other lands devoted to special uses.

Between 1959 and 1964, the land in urban areas, rights-of-way for transportation, public facilities and installations, and farmsteads and farm roads increased by 560,000 acres each year, to nearly 100 million acres. An additional 75 million acres in 1964 were devoted to recreational and wildlife areas, which also use grass and other cover crops. During 1959-64, this type of use grew rapidly—by 2.8 million acres per year.

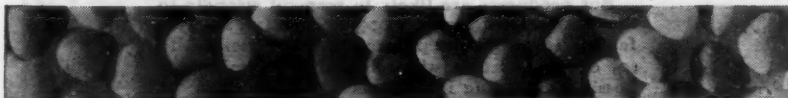
### Export

A large potential market for our seeds exists abroad. Exports of the major grass and legume seeds have increased during this decade. In 1967-68, 61.7 million pounds of these seeds, worth \$16.1 million, were exported.

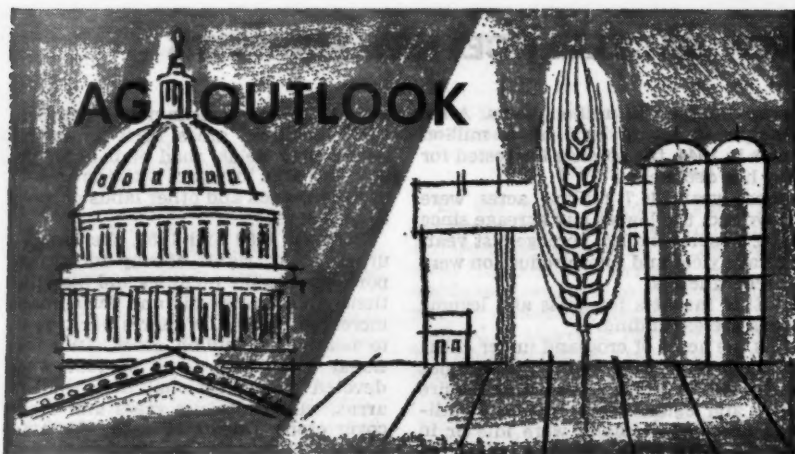
When developing nations improve their agriculture, there is a new demand for improved seed for essential food crops. At a later stage, demand for better forage and pasture increases as the population can afford more meat. For example, Japan is developing seed, to be multiplied in the U.S., as part of a national pasture and forest improvement program.

The U.S. is in an excellent position to supply the needed seed. A wide range of soils and climates allows us to produce seed in areas that simulate most foreign growing conditions. Our high quality seeds are preferred by foreign agriculturalists, and growing their seed here releases needed land at home.

Foundation seed often comes from the foreign customer. For example, German government and private organizations have teamed up to produce foundation alfalfa for contract production here, and eventual re-export to Germany.







Based on Information Available November 1, 1968

### FOOD SHELVES LOADED

Processed vegetables and fruits, both canned and frozen, will be in plentiful supply next year.

The crops which account for 90 percent of vegetables processed totaled about one-fifth larger than last year. The canned pack was up substantially, and added to this, the carryover was much higher than last year. As a result, the supply of canned vegetables for the 1968/69 season is probably about 15 percent higher than last season and a record.

While supplies of nearly all canned vegetables are up, the biggest increases are in sweet corn, beets, snap beans, tomatoes, and tomato products.

Frozen vegetable supplies are moderately larger than last season. Both carryover stocks and packs were above last year. Supplies of all are record large.

The pack of canned noncitrus fruit may be as much as 15 percent larger than last year, and the frozen pack will be up moderately. Larger packs are being reported for peaches, fruit cocktail, Bartlett pears, tart cherries, and apricots.

### 1969 EGG PROSPECTS

For the first six months of 1969, reduction in egg output will continue. By the new year, the laying flock may be 4 to 6 percent smaller than last season. There are fewer replacement pullets this fall and culling rates are relatively high.

But producers are likely to respond strongly to the currently-favorable egg price and feed-price factors, starting more pullets in coming months. If so, egg production will rebound after mid-year, possibly exceeding 1968 levels by fall, 1969.

## MOST CORPORATE FARMS FAMILY-OWNED

Farms operated by corporations tend to be in the top size and sales brackets, and are predominantly family-owned, according to a preliminary survey by USDA.

The survey covers 22 Midwestern, Mountain, and Pacific States. A second survey will enumerate corporate farms in the remaining 28 States.

The 6,703 farms operated by corporations in early 1968 include all farms and ranches in active production, as well as feedlots, chick hatcheries, and egg farms.

The corporate-run farms are a small part of the total farm operations in the 22 States. In 1967, they accounted for:

- Less than 1 percent of the farms;
- 7 percent of the land in farms; and
- 4 percent of the cash receipts from farming in the 22 States.

About 40 percent of the corporate-run farms had gross farm sales last year of up to \$40,000. Another 30 percent fell in the \$40-\$100,000 range, and gross sales of the top third exceeded \$100,000.

Corporate farms were concentrated in the Mountain States. Averaging 11,000 acres in size, they accounted

for 40 percent of the total number and 80 percent of the total land in the corporate-run farms.

### Family Farms

Individuals and families owned four-fifths of all the corporations operating farms in the survey. Although some of the families operated a local business as well as a farm, the majority were engaged only in farming.

Individual and family corporations in the States surveyed accounted for 80 percent of the land in corporate-run farms, 80 percent of those with gross sales of over \$100,000, and two-thirds of the 400 farms with gross sales of over \$500,000 in 1967.

In addition to the family farms which incorporate for business reasons, about one-fifth of the corporate farms in the survey were operated by larger, often publicly owned companies. They operate farms to complement other agricultural businesses or as a business opportunity. Frequently, these companies are engaged in highly specialized livestock operations, rather than in raising crops.

*Economic Research Service*

## WHY THEY INCORPORATE

Families owned and operated most of the corporation farms identified in a survey released recently by USDA. What are their motives for incorporation?

The large scale of most of the incorporated family farms was probably an important factor, for several reasons.

In the event of a business failure, the owners of a corporation may be liable to a smaller personal loss than other proprietors would be. Their loss is limited to the amount invested by them in the corporation.

Corporations, unlike other businesses, can raise equity capital outside the firm, important to the growth of a large-scale farm firm.

Families with large assets in farming are subject to high estate and inheritance taxes if the farm owner dies. Incorporating softens the impact

of these taxes and provides a legal basis for continuing the business.

Incorporation has also been encouraged by a 1958 Federal tax rule, extending the advantages of general corporations to family businesses which incorporate with no more than 10 stockholders.

Farming by corporations is not a new development in agriculture.

The USDA survey indicates that while the number of corporations which operate farms has increased in recent years, almost one-half of the 6,700 corporate-run farms were started before 1960.

The present USDA reports also notes: "A special study of large-scale farms in 1930 showed that more than two-fifths of the large-scale truck and fruit farms and a fourth of the cash-grain farms were incorporated."

## PIPELINES BRING AMMONIA TO MIDWEST

Anhydrous ammonia—the 82-percent nitrogen gas that is injected into soil or used in making other fertilizers—shortly will be piped from prime production areas in the South to the Midwest.

Currently, one anhydrous ammonia pipeline is being completed (1 on map), a second is under construction (2 on map), and a third is under consideration (3 on map). If all three lines are constructed, the total investment will approach \$165 million, and the total capacity will ultimately be about 7 million tons delivery per year.

The pipelines themselves are 8 to 10 inches in diameter on the main lines with smaller diameter distributing pipes. They are buried underground where feasible.

The anhydrous ammonia will be pumped through the pipeline as a liquid under pressure. Then it will be stored

at pipeline terminals which are refrigerated to  $-28^{\circ}$ , to keep it a liquid.

No one knows for sure yet what the advent of the pipelines will do to the structure of the midwestern ammonia market.

The demand for anhydrous ammonia is huge, and growing fast. Here are the facts:

- The Midwest uses about one-half of all nitrogen applied to the soil in the U.S.

- Anhydrous ammonia accounts for somewhere between 40 and 65 percent of all nitrogen applied in the Midwest.

- Anhydrous ammonia consumption in the area could increase by over 10 percent a year for the next 5 years.

In spite of the tremendous demand, however, supplies are large, the price has declined (see "Ammonia use increases," p. 9), and the competition is intense.

If the pipeline projects are brought to fruition, the total capacity for delivering ammonia to the Midwest will be greatly increased.

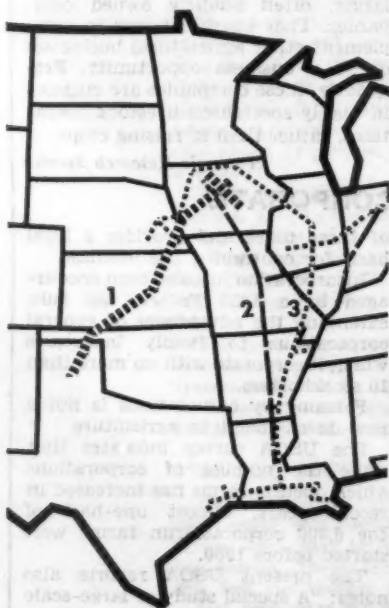
The competition between pipeline transportation and the traditional barge-rail-truck method of delivery is based on the nature of the product itself, and the way the Corn Belt uses it.

Currently, much of ammonia for use in the Midwest is produced on the Gulf Coast of Louisiana and Texas, and in the gas fields of northern Texas.

Some Midwestern States have a significant ammonia plant capacity of their own. But the cost of importing natural gas, basic to ammonia synthesis, from Southern sources does not offset the shorter haul to market.

Gulf Coast producers ship their products up the Mississippi River System in huge refrigerated barges costing nearly \$1 million each. At dockside, the arriving barges transfer their load to refrigerated holding tanks, like the ones which pipeline terminals will utilize. From there, ammonia is transferred to jumbo tank cars, for shipment inland. The next stop is a tank truck or rural storage tanks.

About one-half of the ammonia used in the Midwest is consumed during



Ammonia pipelines, approximate routes. Number (1) is built, number (2) is under construction and (3) is projected.



April, May, and June. Thus Southern producers and shippers maintain storage facilities for the 9-month slack season, and move supplies northward as the season progresses.

Transportation, storage and other charges boost the reported cost of a ton of anhydrous ammonia from \$25-30 at the plant to \$80-100 at the user's field.

The cost of shipping ammonia north may be lower for pipelines than for barges.

Pipelines, like barges, will utilize terminal tanks and rail and truck for final delivery. But by building pipelines into the heart of the Midwest, especially in areas such as Western Iowa and Nebraska the cost of transshipment from the river barges inland can be reduced. The pipeline suppliers will not require as large a storage capacity, since they replenish the pipeline system as it is drained.

Finally, the pipeline can be tapped anywhere along its length, providing simultaneous delivery to a number of points.

## **WILL POTASH PIPELINE BE NEXT?**

A breakthrough in potash transportation may be on the horizon. It's a pipeline for transporting potash in a slurry of crude oil or water.

The Canadian Province of Saskatchewan and an American firm are studying the likelihood of a 20-inch pipeline which would carry potash from Canadian mines in the province to a Great Lakes port.

The slurry would be separated out, yielding potash for midwestern U.S. markets. Oil, if used as the conducting fluid, would be another product of the transportation process.

If it is constructed, the pipeline will cost an estimated \$175 million, and extend over 500 miles. It could cut transportation costs over the stretch by as much as 30 percent.

## **AMMONIA USE INCREASES, PRICES LOWER**

Anhydrous ammonia gas, applied directly to soil as a nitrogen fertilizer, has become a lot more widely used, and a lot less expensive, in recent years.

Just this year, in fact, the application of ammonia gained by one fourth. In the one-year period ending June 30, American farmers applied 3 million tons of the gas to their fields.

Anhydrous ammonia accounted for almost one ton in five of all fertilizer materials applied directly in 1967-68.

Over two-thirds of the 3 million tons of ammonia directly applied were used in the North Central States. Iowa, Illinois, and Nebraska were the biggest consumers.

The price farmers paid for ammonia in 1957-59 averaged \$149 per ton. But by April 15, 1967, farmers reported paying an average of only \$113 per ton. And this April 15, the U.S. average declined to \$91.40 per ton.

Around the country, the price of ammonia on April 15 was highest in the Pacific and South Atlantic States, lowest in the North Central States.

*Statistical Reporting Service*



## CROPS SUFFERING IN MAINLAND CHINA

Weather and the cultural revolution seem to be reducing crop yields this year in mainland China. The weakened administrative apparatus, particularly at county and provincial levels, caused delays in farm work, disrupted farming plans, and possibly modified the balance between socialized and private farming.

Weather so far this year has been less favorable than in 1967, when an exceptional gain in agriculture was the only bright spot in mainland China's economic picture.

This year, the North was too dry and the South too wet.

The belt in which winter wheat is most important suffered. About 90 percent of mainland China's wheat crop is winter wheat. In the North, cold weather adversely affected large tracts of land and frost killed winter wheat in large areas of Honan Province. Other areas were drier than desirable.

The early summer drought also harmed coarse grains and soybeans raised in the wheat belt, and in Manchuria.

Mainland China's most important rice crop, the intermediate one planted in a broad belt bisected by the Yangtze

River, probably matured under normal conditions, although early rains caused some flooding and waterlogging.

Other crops, especially a large array of grains, potatoes, peanuts, and cotton in the Yangtze and other northern river valleys, likely will produce smaller yields than last year. Some were planted too late, some were destroyed by severe storms, and some were destroyed by floods and others had delayed harvest.

Generally, throughout southern mainland China the monsoons started later than usual, were heavy and sporadic as they moved north, and lasted too long.

The cultural revolution has resulted in labor strife, reduction of output, transfer of workers and students to distant rural areas, threats of loss of private plots in farming areas, reduction of capital investment and foreign trade, and a decline in the availability of many household items.

The downturn in the economy which occurred in 1967 continues with increasing evidence of disruption in all phases of rural life. Irrigation and water management, collection of manure, and other off-season farm tasks were neglected during the 1967/68 winter.

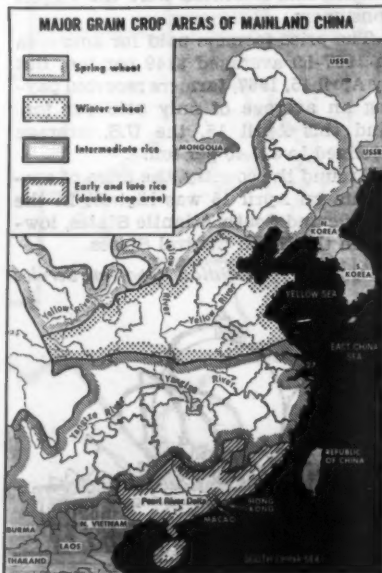
Although agriculture had top priority, not enough machinery, tools, chemical fertilizers, and insecticides were available at the right time to enable farm production to reach its full potential. Record-high purchases of fertilizer from abroad are not likely to close the availability gap.

Mainland China's total foreign trade fell an estimated 6 percent during 1967.

Whereas in 1959 over half of the international trade was with USSR, in 1967 it amounted to less than 3 percent. However, new markets are developing for mainland China in the Middle East, Africa, Singapore, and Malaysia, and others have expanded.

Meat, live animals, fruit, and vegetables, which account for half the value of mainland China's exports, are produced primarily on private plots, which amount to 5 percent of the total cultivated land.

*Marion R. Larsen  
Economic Research Service*



## CORRALLING A CASH CROP OF CATFISH

Why is a channel catfish like a chicken? Because the feed/meat conversion ratio for both animals is similarly low—around 2 pounds of feed per pound of meat for broilers, and as low as 1.25 for catfish.

Surprisingly, further similarities can be found. The channel catfish, like the broiler, can be reared in close quarters, fed with high-protein pellet food, and harvested for meat after several months of feeding.

These qualities, plus heavy demand and attractive prices, have encouraged Southern farmers to raise catfish in farm ponds. There are more than 10,000 acres of commercial catfish ponds in Arkansas and Mississippi alone.

In 1966, farm sales of catfish in Arkansas amounted to \$9 million. Live catfish were recently selling for 30 to 40 cents a pound, and dressed fish for upwards of a dollar a pound. The costs, including mainly labor, pond construction, and feed, average 25 cents a pound, yielding profits of anywhere from \$70 to \$250 per acre of pond.

In a few years, however, keeping cat-

fish in ponds may be as obsolete as letting chickens roam the barnyard.

The pond-raised fish suffer from bruising and battle-scars, since they tend to form a bolsterous social hierarchy. And many ponds are plagued with oxygen starvation when full.

Moreover, the ponds are expensive to construct and must be completely drained to harvest the catfish by hand.

The eventual answer, feel scientists at Southern Illinois University, may be wire mesh, submersible cages, moored to floating docks.

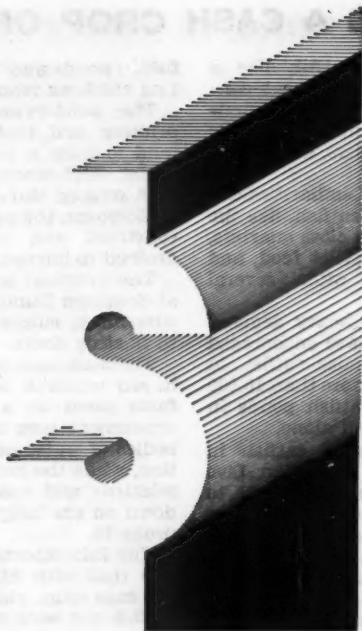
The dock-cage setup can be anchored in any available body of water, from a farm pond to a river. The Illinois experiment uses a quarry lake. Large bodies of water provide better circulation, while the long, wide cages permit selective and easy harvests and cut down on the infighting the catfish are prone to.

The fish experts at Southern Illinois feel that with high-protein food and the cage setup, yields of 3,000 pounds of catfish per acre of water are feasible.

*Southern Illinois University*



## INSIDE



## FARM TAX RETURNS

How does income from farming fit into the total livelihood of the people who receive it?

With the complexity of farm ownership comes a complex answer to the question.

At one end of the spectrum, there's the farmer-proprietor or farmer-tenant who relies almost completely on the proceeds of farming.

At the other end are people who are not presently farmers, but who receive some sort of income from a farm to supplement other sources.

Since they report all these sources and amounts to the Internal Revenue Service each year, USDA economists examined data from 1963 tax returns which included farm income, to find out how farm and other income types are blended.

In the year studied, there were 3.2 million tax returns which showed income from farming—either profits or losses from a farm operation.

For several reasons, however, the number of tax returns didn't correspond to the number of farms or the number of farmers in that year.

One reason is that income from a

single farm shows up on several tax returns if it is owned by partners or if both the owner and his tenant share the profits.

Another is that tax returns do not include reports from any farmers who make less than the minimum filing requirement of \$600 taxable income from all sources. And the returns include income from many who are not primarily farmers.

Four-fifths of the returns studied showed income from sources besides farming. Here are some highlights from the tax return study concerning the nonfarm sources:

*Wages and salaries* were the most important nonfarm income source—reported by more than 2/3 of the returns studied, and accounting for 65 percent of nonfarm earnings.

The paycheck was especially important on tax returns showing farm losses or gains totaling less than \$1,200. This group of more than 1 million returns reported more than 70 percent of nonfarm income from wages and salaries.

**Nonfarm businesses.** About 1 return in 10 reporting income from farming came from the sole proprietor of a nonfarm business, and around 1 in 25 came from a partner in one.

Income from these sources totaled 14 percent of nonfarm income on the 3.2 million tax returns in 1963. Those reporting farm losses reported business profits nearly twice as often as those with farm profits, and nonfarm income on them averaged double farm income.

**Dividends.** Dividends were an important source of nonfarm income only on a few tax returns. About 12 percent of returns reporting farm income in 1963 listed dividends. The dividend income represented 8 percent of all reported nonfarm earnings for the tax

returns studied.

Dividends were largest and reported most frequently by those with the largest farm losses.

**Interest,** totaling about 7 percent of all nonfarm income, was reported on 40 percent of the farm tax forms. Like dividends, interest averaged higher on those with large losses, but it was more widely distributed.

**Capital gains.** About two-thirds of the tax returns showed capital gains and other types of income, including the sale of farm and nonfarm assets, rents, royalties, pensions and annuities, and other sources.

*Economic Research Service*

## HOW FARM PROFIT, TOTAL INCOME COMPARE

A USDA study of 1963 income tax returns which reported farm income, shows that a wide range of people derive some of their living from farming. The following table shows how the farm profit or loss reported on these returns corresponded to the

total income reported.

The net farm profit may not equal the income of a particular farm because of the IRS definition of profit, and because a farm's total income may be distributed among a number of taxpayers.

### Farm and Off-farm Income, Based on 1963 Tax Returns

Reported farm profit or loss	Number of Returns	Average Gross Farm Receipts	Average, Combined Farm and Off-Farm Income
	Thousands	Dollars	Dollars
<b>Net farm profit:</b>			
\$10,000 or more.....	50	60,450	20,120
\$5,000 to \$10,000.....	167	26,660	8,500
\$1,200 to \$5,000.....	854	11,820	4,170
\$400 to \$1,200.....	584	5,100	2,790
\$100 to \$400.....	337	3,270	3,180
Less than \$100.....	111	2,660	3,970
<b>Averages.....</b>		<b>10,440</b>	<b>4,340</b>
<b>Net farm loss:</b>			
Less than \$100.....	96	2,690	4,160
\$100 to \$400.....	241	2,840	4,540
\$400 to \$1,200.....	381	3,390	4,700
\$1,200 to \$5,000.....	310	6,540	5,140
\$5,000 to \$10,000.....	40	16,190	7,720
\$10,000 or more.....	26	55,220	21,700
<b>Averages.....</b>		<b>5,790</b>	<b>5,250</b>



## FEWER PUFFS PER PERSON

In spite of record income levels, the rate of cigarette smoking is declining.

The number of cigarettes smoked per adult, which fell slightly in 1967, is estimated 4.3 packs per person lower for 1968.

American adults still smoke an average of about 210 packs a year, the same number as they did in 1964, when the first "Surgeon General's Report" put a noticeable dent in cigarette consumption.

The "Second Surgeon General's Report," issued in mid-1967, apparently contributed to this year's 2 percent decline in the adult smoking rate. Other contributing factors are the public discussion and commercials concerning the smoking-health relationship.

In addition, cigarette prices are rising. Retail prices were 8 percent higher than a year earlier this June. The average of State cigarette taxes was 8.9 cents in June, up from 7.1 cents a year earlier.

Ordinarily, the gain in personal income during 1968 would be associated with a higher rate of cigarette consumption.

### Other Tobaccos

Although the cigarette smoking rate is declining, the rate of cigar smoking is unchanged, and the rate of smoking tobacco use is increasing.

Cigar consumption this year is equivalent to 130.5 per adult male, fractionally lower than in 1967. The rate had been declining since 1964, when it reached a peak of 154.4.

The rate of cigar smoking since 1964 has been the highest in many years. The last time the rate exceeded 130 was in the late 1920's.

The use of smoking tobacco is another story. Declining since the 1930's, consumption per adult male reached a low of 1.08 pounds last year.

The rate increased a little this year, to 1.13 pounds per adult male, and may increase slightly next year.

Smoking tobacco includes some tobacco used in roll-your-own cigarettes. Figures on the number of cigarette papers sold suggest that use of these cigarettes is increasing, which may partly account for the increase in smoking tobacco use this year.

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## TOBACCO IMPORTS GAIN

The world's biggest producer and exporter of tobacco, the U.S., is also the third largest importer. Imported tobacco will account for one-sixth of all tobacco consumed in the U.S. this year.

Most of the imported tobacco is unmanufactured cigarette leaf and scrap tobaccos, which U.S. cigarette makers blend with domestic tobaccos. The important feature of the imports is their low price.

Imports of cigarette tobaccos rose 26 million pounds, to 172 million pounds last year, and another large gain is expected in 1968, as cigarette makers attempt to stabilize their prices.

Smoking tobacco imports are increasing by one-third this year, and are expected to gain further in 1969. Imports of this kind have gained steadily for years. Totalling an estimated 5 million pounds for 1968, they are equal to about 7 percent of our domestic output of smoking tobaccos.

Imports of manufactured cigars are

increasing by an estimated one-third this year, but still account for less than 1 percent of our total cigar consumption.

Imports of unmanufactured cigar tobaccos—leaf and scrap—are at record high levels, and exceed the amount of domestic fillers used in cigars.

Total imports of unmanufactured tobaccos for immediate use in cigarette and cigar manufacture totaled 135 million pounds for the first 7 months of 1968. This compares with only 109 million pounds in the same period last year.

Turkey and Greece provide most of our imported cigarette tobaccos, and the Philippine Republic, Dominican Republic, and Colombia most of our cigar tobacco imports. Manufactured smoking tobacco comes mainly from England and Holland, while manufactured cigars come primarily from the Philippines, Canary Islands, and Holland.

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## SAM STAT SAYS

### "Check My Data"

#### A brief roundup

■ SRS forecasts the output of bentgrass seed this year 36 percent below the 1967 crop. Yields in Washington and Oregon are 100 pounds below average. ■ Acreage increases, especially in Kansas and Oklahoma, offset lower seed yields around the country to boost the forecast of alfalfa seed production slightly above last year's 113.2 million pounds. ■ Top growth of winter wheat available for grazing this fall was rated poor by farmers in Western Kansas and North Central Texas, and fair in Central Kansas, Western Oklahoma, and the Texas Panhandle. An estimated 7.1 acres of wheat pasture in the tri-State area were required to carry a 400-pound calf, versus 6.8 acres last fall. ■ In the year ending on June 30, 41 percent of all fertilizers used on farms were directly-applied types. This was 2 percent more than the preceding 1-year period.

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#### NEW DRUG 'MELTS' FLEECE OFF SHEEP

A young man from the city, with just a few minutes' instruction, quickly took the fleece from a sheep in a demonstration. He duplicated a job now performed only by highly skilled sheep shearers—without clippers.

He merely grabbed a handful of wool at a time, and rolling his wrist along the sheep's skin, he pulled

off the fleece without strain on himself, discomfort to the sheep, or wastage of wool.

The sheep was dosed with an experimental chemical, previously used mainly in cancer therapy. It was found that the drug, aimed at stopping cell growth in tumors, also interrupted cell growth in hair roots, causing test subjects, including sheep, to lose their hair or wool temporarily.

In sheep, the chemical causes a ringlike constriction in each wool fiber beneath the skin surface.

The constriction moves up from the bulb of each wool fiber as it grows, and in 6 to 7 days reaches a position just below the skin surface.

At that point the fiber breaks easily and the entire fleece can be separated at the skinline, leaving the sheep completely bare.

If the fleece is left on longer than 7 days, the constriction grows out above the skin surface, so that after fleece removal, a short coat of new wool protects the skin, much as in shearing.

The Agricultural Situation is sent free to crop, livestock, and price reporters in connection with their reporting work.

The Agricultural Situation is a monthly publication of the Statistical Reporting Service, United States Department of Agriculture, Washington, D.C. 20250. The printing of this publication has been approved by the Bureau of the Budget (March 12, 1964). Single copy 10 cents, subscription price \$1 a year, foreign \$1.50, payable in check or money order to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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## WASHINGTON, D.C. 2025

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